NCCWSC Breakout Powerpoint Presentations

December 3 and 4, 2008

Breakout Group 2

Report Out Two

Objective

- To facilitate management and science teams to do thorough national reviews of priority issues. These issues may be new or already identified by CCSP etc. Reviews would
  - Include assessments
  - Identify existing capabilities, data, models that can be used to address the issue.
  - Identify appropriate scales.
  - Identify gaps and needs
  - Support regional-level solutions/tools/results.

Examples of Issues

- Implications of a national energy plan
- Sea level rise
- Water availability

Examples of Collaborations

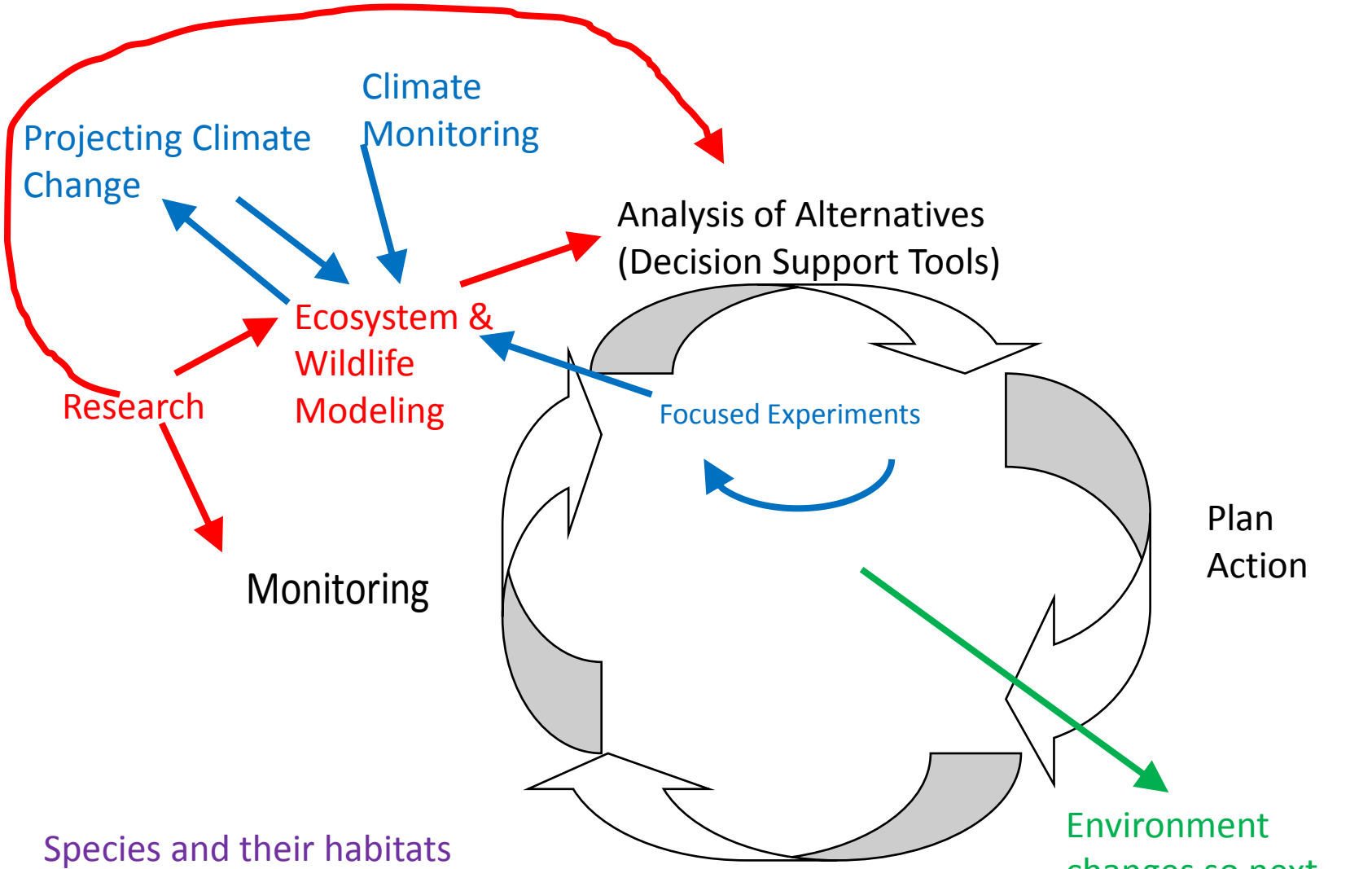
- Joint Fire Sciences
- Joint Ventures

Outputs—Facilitate:

- Downscaling of climate models with variables that can be used for management, e.g., forest structure
- Establish best practices
  - Common monitoring protocols
- Communication
  - Seminars on the hill
- Tools
  - Triage
  - Ecosystem Services

Breakout Group 4

Report Out Two and Three



Species and their habitats

Multi-stakeholder

Multi-year

Assumes uncertainty

Analysis of Alternatives

- Decision support tools – facilitate management approaches with a social dimension – ethical, policy, economics, genetics, etc.
- Assistance in formulation and stakeholder involvement – social and economic

Plan Action

- Assistance in planning and monitoring

Delivery

- This is a role the Center would not play

Monitoring

- Genetics – understand natural history of a species – is the gene pool important to preserve – managed relocation – risk assessments
- Biological data management – models need adequate data sets and center can coordinate (currently not digital, different protocols)
- Local data that can be rolled up to national and global

Research

- Along with specific agency/partner needs, the Center should identify research needs that a single agency/partner can not or would not address
- Identify current land holding and determine if they are the right holdings, what connectivity the holdings have, and what acquisitions should be made

Modeling

- Wildlife and ecosystem health – including interactions as species move or are moved
- Improved wildlife models
- Continued support of improved climate change models

Communication

- Establish a network to connect expertise and facilitate coordination to serve the needs of the natural resource managers
- Facilitate communication and workshops
- Engage non-traditional partners (Energy, etc)
- Coordinated education and outreach
- Local, Regional, National, Global

Additional Activities for the Center

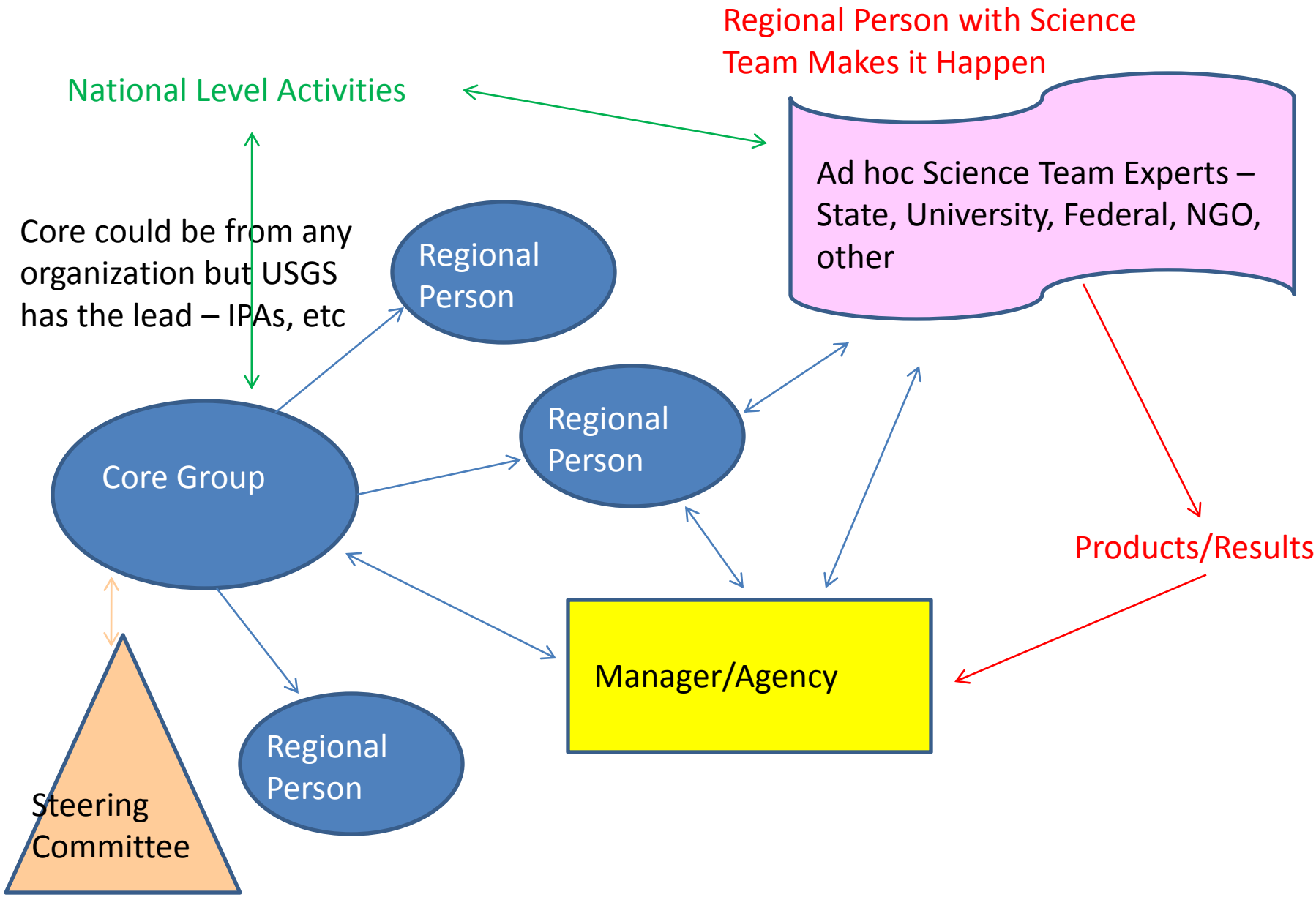
- Case studies of relevant partnerships that have worked
- Examples of models that have worked
- High visibility pilot projects (near term, high opportunity for success)
- Develop a strategy to include climate in Strategic Habitat Conservation Plans under development and already developed

Overarching

- Vision exciting enough to bring partners to the table
- Develop rewards and vested interest
- Plan and an implementation plan
- Filling in the matrix across ecosystems, areas, regions
- Address current management needs and research for the future – balance

Organization

- Not a brick and mortar building
- Small core group of individuals
- Coordinator who knows what is happening and how to connect others to address a need (could be in the core group or at the Region/Area)
- Dynamic team of scientists as needed
  - State
  - University
  - Federal
  - NGOs
  - Other


Regional Person with Science Team Makes it Happen
National Level Activities
Ad hoc Science Team Experts – State, University, Federal, NGO, other
Core could be from any organization but USGS has the lead – IPAs, etc
Regional Person
Regional Person
Core Group
Products/Results
Manager/Agency
Regional Person
Steering Committee

Steering Committee

- Priority-setting
- Decision-making body
- Rotating chairs of partners (USGS more equal than others because final responsibility sits with the Director of the USGS)

Phased Approach

- Establish Core Team
- Vision and Plan Development
- Establish Steering Committee
- Establish Regional Contact – phase them in gradually increasing number of Regions

Breakout Group 6

Report Out One and Two

New Approach to Center Objectives

Three main realms (interrelated and circular)

- Science Synthesis
- Planning Tools
- Monitoring

Science Synthesis

- Assess science and management needs
  - Coordinate & convene stakeholders
- Assess data repositories for
  - Climate modeling
  - Movement of species & habitats
  - Model integrations
  - Vulnerability assessments
  - Wildlife sensitivity
- Develop access to databases
- Find gaps in knowledge
- Prioritize what's needed

Planning Tools

- Adaptive Management (one tool among others)
- Risk Assessment
- Scenario Planning
- Structured Decision Process
- Vulnerability Assessment
- Provide technical assistance for land mgmt agencies
  - E.g., for climate models
    - Provide comparisons between models
  - Link climate & biological models

Inventory & Monitoring

- Multiple scales needed
- Priority setting
  - Scoping of needs
  - Technical feasibility
    - Consider appropriate metrics for distribution, abundance, demographic drivers
- Biological monitoring
  - Identify goals and objectives
- Also non-biological monitoring
  - Land use, hydrology, etc.
- Serve coordinating function across jurisdictions to develop standards for monitoring
  - Recognize importance of strong standardization

Center Focus

- Clarify title of objective--what's meant by Adaptive Management? Or is it Wildlife Adaptation to Climate Change
- Overlap between this objective & others, e.g., monitoring
- Scoping of available tools & needs of management community: Gap analysis/needs assessment of information and tools
- Serve as clearinghouse for information/tools/models
- Find balance in developing new tools (innovation) and enhance existing tools (continuity)
  - e.g., develop predictive models for species distribution changes; determining thresholds of system change
- Integrate training into application of tools; make tools more "user friendly" for managers
- Presents opportunity for broad application of tools at landscape levels and across jurisdictional boundaries
  - USGS in good position to facilitate since not land mgmt agency

Partnerships & Challenges

- True partnership among organizations rather than a client-provider relationship between agencies; interface between science "developers" and science "users," i.e., management agencies
- Consider non-traditional partnerships, e.g., towns, communities, academics
- Center can help coordinate activities among agencies at various levels, e.g. monitoring?
  - Commitment for long-term is important
  - Not stifling innovation
- Need commitment of resources
- Address funding relationship up-front

Information Streams

- Regional & Local downscaling of climate models
- Integration of climate model results with population models
- Help to characterize new data needs
  - Identifying population thresholds
  - Identifying population drivers/limiters
- Integrate with social disciplines

Breakout Group 7

Report Out Two and Three

Top Priorities & Recommendations

- The Center should focus its projections on adaptation for the next 30 years. Including:
  - Mapping habitat, species and human populations shifts
  - Identifying barriers to animal and habitat movement
  - Address lands mgmt. (e.g., private lands: partnerships or acquisitions)
- Improving relationships between USGS and the States and federal agencies.
- Provide expertise to States and agencies to include climate change impacts in action plans.
- Include biological monitoring in existing restoration projects.

Top Priorities & Recommendations

- Develop a national monitoring strategy across all agencies (protocols for how to collect relevant data for indicator species and their habitats).
- Create networks for implementing strategy.
- Early Warning System:
  - Step 1: create an early warning system (tipping points)
  - Step 2: create an action plan for responding to triggers/thresholds
  - Step 3: generate options for policy actions and management response (provide guidance for decision-makers)

Organizational Approaches

- Organizational structure will/should depend on stated objectives of the Center
- Mechanisms for on the ground input and engagement (expert workshops, subcommittees)

Organizational Approaches

Create:

- Management Board – Group of Center staff combined with various Federal volunteers that focuses on internal issues such as:
  - Policy decision making
  - Priority setting
  - Identifying gaps
  - Oversight and accountability
  - Inform existing funding mechanisms
  - Smaller group (e.g., <10); rotates

Organizational Approaches

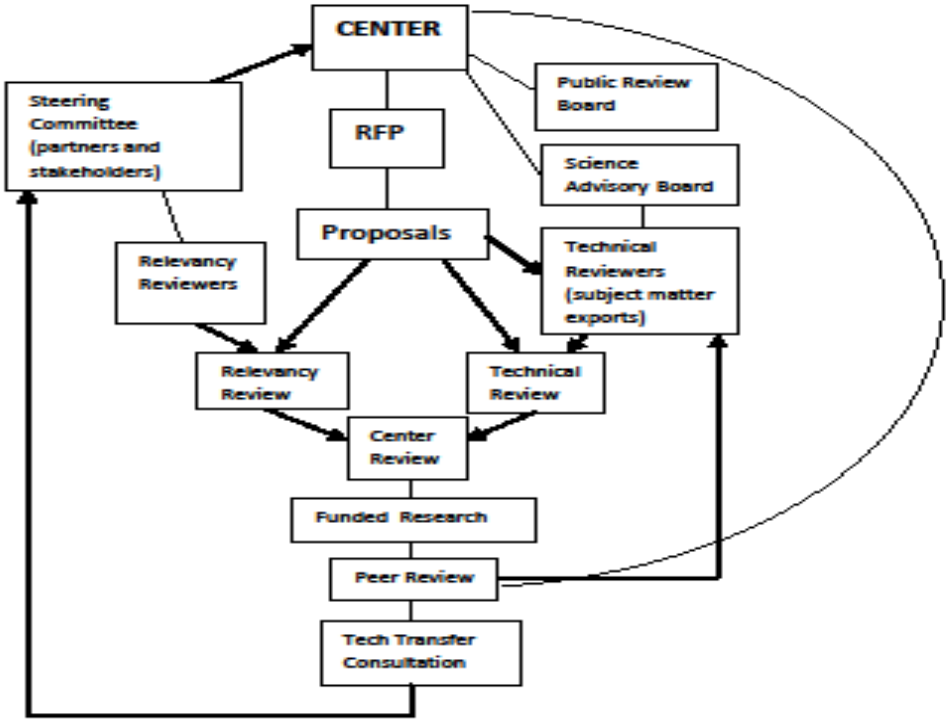
Create:

- Advisory Board – Volunteer group that focuses on technical/science issues; identifies gaps, communicates with wildlife managers
  - externally connected and informed
  - Larger group than Mgmt Board; rotates
- Examples include Wetlands Council, AFWA, National Integrative Drought Information System

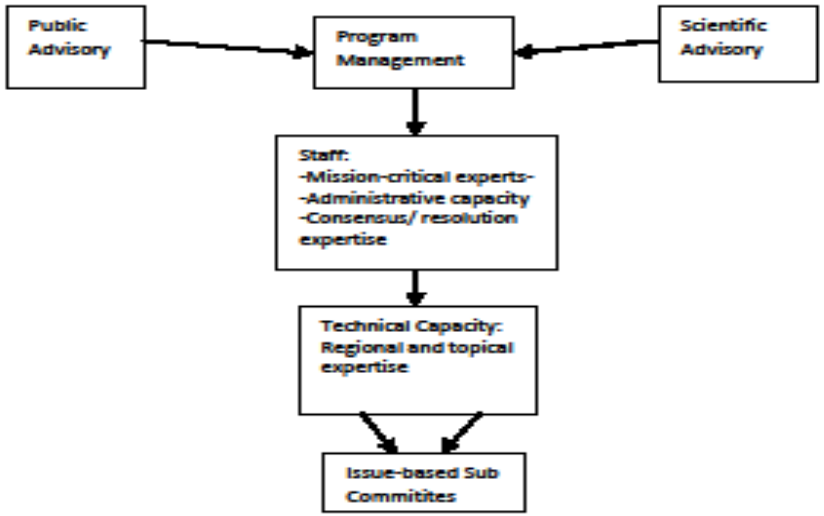
Breakout Group 8

Report Out Three

Flow Chart One



Flow Chart Two



Breakout Group 10

Report Out One

Adaptive Management

- Adaptation versus adaptive management (AD).
- The Center primarily provides; technical support and secondarily informs and participates with managers in AD (strategic focus).
- Synthesizes management alternatives and options for wildlife/land management regarding CC.
- Synthesizes/generates monitoring structure and designs and strategies
- Generates and responds to wildlife/PLANT climate change needs.
- Identifies and fills gaps in expertise and information
- Interfaces between researchers and managers (data in / results out and up / down among modelers and managers)
- Highlight the unique role of the Center regarding AD

Breakout Group 11

Report Out Two

NCCWSC Workshop

Build Science Basis and Capacity for the NCCWSC

- The NCCWSC needs to consist of an interdisciplinary **team** of biologists, statisticians, modelers, social scientists, GIS, landscape modelers, etc. to be a resource to respond to Agency managers issues brought to them.

- Ideally, the team should be physically located at the same site.
- Under the leadership and direction of a core of permanent team members partnering agencies contribute personnel to the team on a 2-3 year rotational basis to build capacity, enhance interagency communications, and represent various agency perspectives.

NCCWSC Workshop

Build Science Basis and Capacity for the NCCWSC

- Capacity building through technology
  - Identify and promote the use of micro-technology monitoring tools to:
    - Minimize cost of deploying and maintaining long-term monitoring stations;
    - Maximize data collection.
  - Promote interactive use of Geographic Information Systems to foster interactivity of analytical tool development.
  - Use cutting-edge video conferencing capabilities to enhance frequent real-time interactive communication and promote cooperation.
- Synthesize data to identify gaps in knowledge and communicate in white papers.
- Develop metrics for ecosystem function (species to trophic level interactions) (and services: values for human use) and vet against other agencies.

NCCWSC Workshop

Develop Tools for Decision Management Systems

- Interagency development of common monitoring and assessment protocols.
- Promote and sponsor the development of a biologically driven sub-regional climate model that can work at the federal, state, and local levels that wildlife resource managers can use. This should be a generic tool available online with the capability to be customized.
- Center not to be responsible for developing tools, but identifying critical gaps for applying tools in context of climate change, and then promoting and sponsoring research to fill the gaps but not develop the tools themselves. Such as:

NCCWSC Workshop

Develop Tools for Decision Management Systems

- Locate, compile, and assess existing decision support models used by wildlife resource managers and serve to the public.
- Web based instruction for land managers and public in:

Breakout Group 12

Report Out Two and Three

Objective 1

Assess status of current knowledge and prioritize needs for research

- Identify the shared, common needs among the partners
- Including issues about scaling climate models to regional and local levels

Objective 2

Facilitate (re: climate-change science)

- General communication, collaboration and dissemination of information of common importance
- Reductions in diseconomies of scale
- Identification of ongoing, common information needs
- Deliberations and actions regarding filling information gaps
  - Ad hoc committees/teams, focused workshops
  - Funding research (basic, applied, multiscale, multidisciplinary) that has been identified as critical
- Linkages among specific scientists, land managers, organizations, etc., to enable effective use of CC-science-based information

Objective 3

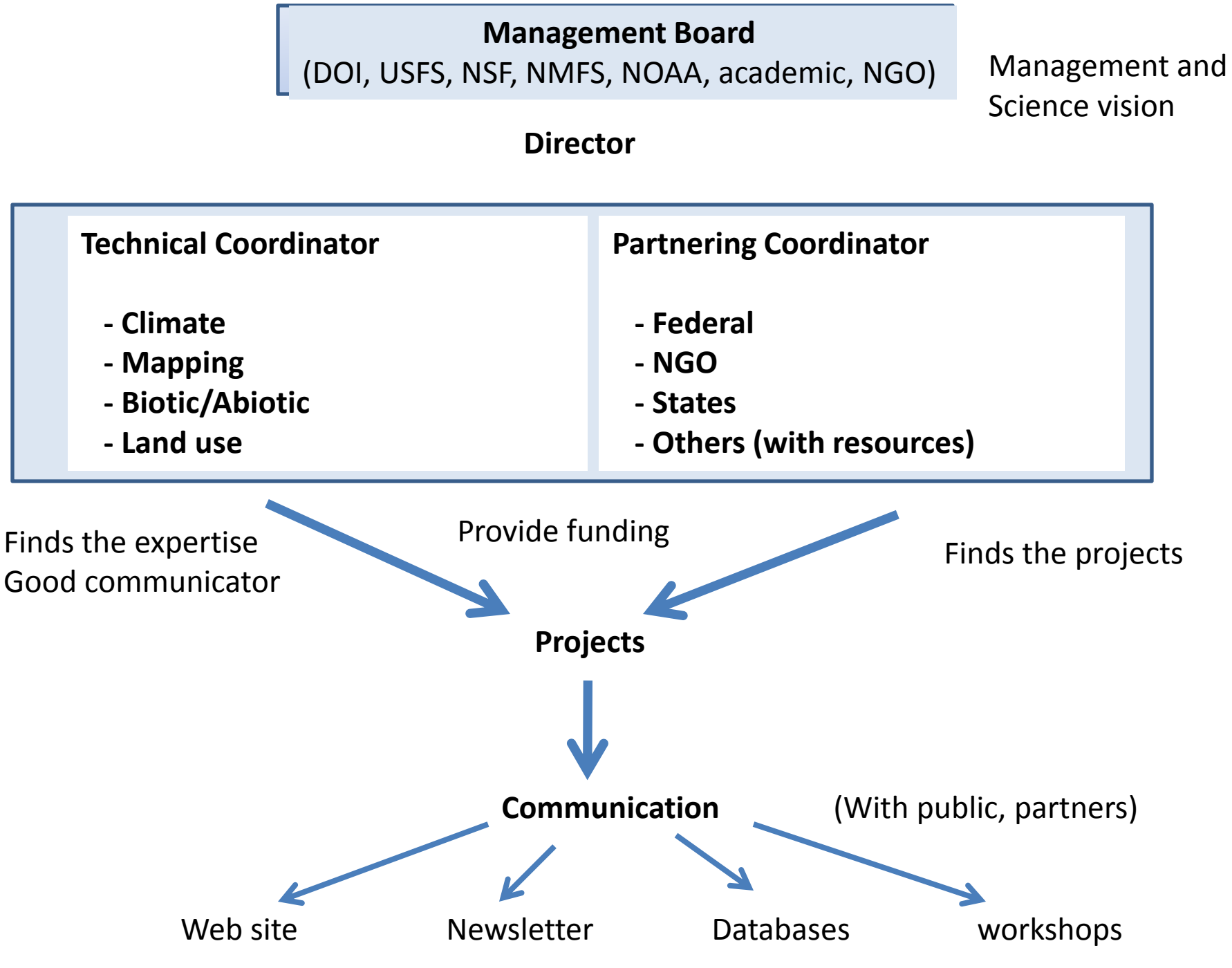
The Center will promote, facilitate and take an active lead in ….

(rest of previous wording OK)

Objective 4

Improve existing and, if necessary, develop new … (implications of efficiency)

(rest of previous wording OK)


Management Board
(DOI, USFS, NSF, NMFS, NOAA, academic, NGO)
Management and Science vision
Director
Technical Coordinator
- Climate
- Mapping
- Biotic/Abiotic
- Land use
Partnering Coordinator
- Federal
- NGO
- States
- Others (with resources)
Finds the expertise
Good communicator
Provide funding
Finds the projects
Projects
Communication
(With public, partners)
Web site
Newsletter
Databases
workshops